

Remarks

I. Application History

As evident from the filing date, this case has been pending for over nine years. A first Office Action was mailed by Examiner Burgess on December 14, 2004, exactly five years ago. After applicants responded, a Restriction Requirement was mailed by Examiner Burgess on May 31, 2005. After applicants responded to the Restriction Requirement, a second non-final Office Action was mailed by Examiner Burgess on September 20, 2005. After applicants responded to the second non-final Office Action, a third non-final Office Action was mailed by Examiner Burgess on March 28, 2006. After applicants responded to the third non-final Office Action, a fourth non-final Office Action was mailed by Examiner Burgess on August 10, 2006. After applicants responded to the fourth non-final Office Action, a fifth non-final Office Action was mailed by Examiner Burgess on March 20, 2007. That fifth non-final Office Action relied on a provisional application that Examiner Burgess did not provide to applicants, and applicants filed a response without the benefit of seeing the provisional application and then filed a supplemental response after obtaining a copy of the provisional application. Examiner Burgess then mailed a Final Rejection on September 20, 2007.

Applicants filed an Appeal Brief on January 31, 2008. Examiner Burgess reopened prosecution May 2, 2008, with a new Office Action that was very similar to the Final Rejection. A Request for Reinstatement of Appeal and a Supplemental Appeal Brief were filed July 30, 2008. A Notification of Non-Compliant Appeal Brief was mailed April 8, 2009. A Revised Appeal Brief was filed by applicants on April 8, 2009. Examiner Burgess again reopened prosecution with the latest Office Action, which was mailed July 15, 2009.

Applicants note that a goal of patent examination is to provide a prompt and complete examination of a patent application.

It is essential that patent applicants obtain a prompt yet complete examination of their applications. Under the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability in the initial review of the application, even if one or more claims are found to be deficient with respect to some statutory requirement. Thus, USPTO personnel should

state all reasons and bases for rejecting claims in the first Office action. Deficiencies should be explained clearly, particularly when they serve as a basis for a rejection. Whenever practicable, USPTO personnel should indicate how rejections may be overcome and how problems may be resolved. A failure to follow this approach can lead to unnecessary delays in the prosecution of the application.

See Manual of Patent Examining Procedure (MPEP) §2106(II). As such, applicants assume, based on the goals of patent examination noted above, that the present Office Action has set forth “all reasons and bases” for rejecting the claims.

II. 35 U.S.C. §102

A. The Rejection over Elzur

Claims 1, 3-4, 21, 23, 28-31 and 33 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,427,169 to Elzur.

1. Claim 1

Regarding claim 1, the latest Office Action states, on pages 2 and 3:

As per claim 1, Elzur discloses an interface device for a computer, the interface device connectable to a network and a storage unit, the storage unit including a disk drive, the interface device comprising:

- A sequencer including a hardware logic circuit configured to process a transport layer header of a network packet (column 2, lines 43-47, 55-58, 64-67, column 3, lines 1-4);
- A memory adapted to store control information regarding a network connection being handled by said device (column 4, lines 2-4, 15-17, 62-67);
- A mechanism for associating said packet with said control information (column 4, lines 20-30, column 5, lines 5-10).
- selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer (column 5, lines 59-65, column 6, lines 7-10, 42-52);
- the storage unit including a disk drive (column 11, lines 57-64).

Applicants again respectfully disagree. The Office Action refers to “column 11, lines 57-64” for the claimed limitation of “the storage unit including a disk drive, yet refers to “column 5, lines 59-65, column 6, lines 7-10, 42-52” for the claimed limitation of “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is no “storage unit” in “column 5, lines 59-65, column 6, lines 7-10, 42-52,” however, that includes a disk drive,

as recited in the claim. The “floppy disk drive 76” mentioned in “column 11, lines 57-64” is not included in anything described in “column 5, lines 59-65, column 6, lines 7-10, 42-52.” For at least this reason, Elzur does not anticipate claim 1.

Applicants also respectfully assert that “column 5, lines 59-65, column 6, lines 7-10, 42-52” do not teach “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is nothing in the cited portion of Elzur that teaches “thereby avoiding the computer.” For at least this additional reason, Elzur does not anticipate claim 1.

Applicants respectfully assert that the Examiner has yet again failed to present even a *prima facie* case of anticipation of claim 1 or any claim that depends from claim 1.

2. Claim 3

Regarding claim 3, the latest Office Action states, on page 3:

As per claim 3, Elzur discloses the interface device of claim 1, further comprising a plurality of network ports, wherein one of the said network ports is connectable to the storage unit (column 4, lines 43-45, column 6, lines 49-50, column 11, lines 28-30).

Applicants again respectfully disagree. There is no “one of the said network ports” in “column 4, lines 43-45, column 6, lines 49-50, column 11, lines 28-30” that “is connectable to the storage unit.” As noted in the cited portion of column 6, “The TCP (or other layer 4 protocol, e.g., RTP) destination port uniquely identifies the application that is to receive the data and thus, identifies the appropriate buffer 304 for the packet data.” In other words, each of the ports cited by the Office Action is actually a number that “uniquely identifies the application that is to receive the data,” not a physical port that could connect to the storage unit. For at least this reason, Elzur does not anticipate claim 3.

3. Claim 4

Regarding claim 4, the latest Office Action states, on page 3:

As per claim 4, Elzur discloses the interface device of claim 1, further comprising a Fibre Channel controller connectable to the storage unit (column 3, lines 46-60).

Applicants again respectfully disagree. There simply is no “Fibre Channel controller connectable to the storage unit,” in “column 3, lines 46-60.” There actually is no “Fibre Channel controller” mentioned anywhere in Elzur. For at least this reason, Elzur does not anticipate claim 4.

4. Claim 21

Regarding claim 21, the latest Office Action states, on pages 3 and 4:

As per claim 21, Elzur discloses an interface device for a computer, the interface device connectable to a network and a storage unit, the storage unit including a disk drive, the interface device comprising:

- A receive mechanism that processes a Transmission Control Protocol (TCP) header of a network packet (column 2, lines 43-47, 55-58, 64-67, column 3, lines 1-4);
- A memory storing a combination of information describing an established TCP connection (column 4, lines 2-4, 15-17, 62-67);
- A processing mechanism that associates said packet with said information (column 4, lines 20-30, column 5, lines 5-10);
- selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer (column 5, lines 59-65, column 6, lines 7-10, 42-52);
- the storage unit including a disk drive (column 11, lines 57-64).

Applicants again respectfully disagree. As noted above with regard to claim 1, the Office Action refers to “column 11, lines 57-64” for the claimed limitation of “the storage unit including a disk drive, yet refers to “column 5, lines 59-65, column 6, lines 7-10, 42-52” for the claimed limitation of “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is no “storage unit” in “column 5, lines 59-65, column 6, lines 7-10, 42-52,” however, that includes a disk drive, as recited in the claim. The “floppy disk drive 76” mentioned in “column 11, lines 57-64” is not included in anything described in “column 5, lines 59-65, column 6, lines 7-10, 42-52.” For at least this reason, Elzur does not anticipate claim 21.

Applicants also respectfully assert that “column 5, lines 59-65, column 6, lines 7-10, 42-52” do not teach “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is

nothing in the cited portion of Elzur that teaches “thereby avoiding the computer.” For at least this additional reason, Elzur does not anticipate claim 21.

Applicants respectfully assert that the Examiner has yet again failed to present even a *prima facie* case of anticipation of claim 21 or any claim that depends from claim 21.

5. Claim 23

Regarding claim 23, the latest Office Action states, on page 4:

As per claim 23, Elzur discloses the interface of claim 21, further comprising a Fibre Channel controller connectable to the storage unit (column 3, lines 46-60).

Applicants again respectfully disagree. There simply is no “Fibre Channel controller connectable to the storage unit,” in “column 3, lines 46-60.” There actually is no “Fibre Channel controller” mentioned anywhere in Elzur. For at least this reason, Elzur does not anticipate claim 23.

6. Claim 28

Regarding claim 28, the latest Office Action states, on pages 4 and 5:

As per claim 28, Muller discloses a method for operating an interface device for a computer, the interface device connectable to a network and a storage unit, the storage unit including a disk drive, the method comprising:

- Receiving, by the interface device from the network, a packet containing data and a Transmission Control Protocol (TCP) header (column 2, lines 43-47, 55-58, 64-67, column 3, lines 1-4);
- Processing, by the interface device, the TCP header (column 2, lines 43-47, 55-58, 64-67, column 3, lines 1-4);
- Storing, on the interface device, information regarding a TCP connection (column 4, lines 2-4, 15-17, 62-67);
- Associating, by the interface device, the packet with the TCP connection (column 4, lines 20-30, column 5, lines 5-10);
- Selecting, by the interface device, whether to process the packet by the computer or to send the data from the packet to the storage unit, thereby avoiding the computer (column 5, lines 59-65, column 6, lines 7-10, 42-52);
- the storage unit including a disk drive (column 11, lines 57-64).

Applicants again respectfully disagree. As noted above with regard to claims 1 and 21, the Office Action refers to “column 11, lines 57-64” for the claimed limitation of “the storage unit including a disk drive, yet refers to “column 5, lines 59-65, column 6, lines 7-10, 42-52” for the claimed limitation of “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is no “storage unit” in “column 5, lines 59-65, column 6, lines 7-10, 42-52,” however, that includes a disk drive, as recited in the claim. The “floppy disk drive 76” mentioned in “column 11, lines 57-64” is not included in anything described in “column 5, lines 59-65, column 6, lines 7-10, 42-52.” For at least this reason, Elzur does not anticipate claim 28.

Applicants also respectfully assert that “column 5, lines 59-65, column 6, lines 7-10, 42-52” do not teach “selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.” There is nothing in the cited portion of Elzur that teaches “thereby avoiding the computer.” For at least this additional reason, Elzur does not anticipate claim 28.

Applicants respectfully assert that the Examiner has yet again failed to present even a *prima facie* case of anticipation of claim 28 or any claim that depends from claim 28.

7. Claim 30

Regarding claim 30, the latest Office Action states, on page 5:

As per claim 30, Elzur discloses the method of claim 28, wherein the interface device includes a network port, and the packet is received via the port and the data is sent to the storage unit via the port (column 4, lines 43-45, column 6, lines 49-50, column 11, lines 28-30).

Applicants again respectfully disagree. There is no “network port” in “column 4, lines 43-45, column 6, lines 49-50, column 11, lines 28-30” wherein “the packet is received via the port and the data is sent to the storage unit via the port.” As noted in the cited portion of column 6, “The TCP (or other layer 4 protocol, e.g., RTP) destination port uniquely identifies the application that is to receive the data and thus, identifies the appropriate buffer 304 for the packet data.” In other words, each of the ports cited by the Office Action is actually a number that “uniquely identifies the application that is to

receive the data,” not a physical port such that “the packet is received via the port and the data is sent to the storage unit via the port.” For at least this reason, Elzur does not anticipate claim 30.

9. Claim 33

Regarding claim 33, the latest Office Action states, on page 6:

As per claim 33, Elzur discloses the method of claim 28, further comprising adding a network protocol header to the data for sending the data to the storage unit (column 7, lines 35-49).

Applicants again respectfully disagree. There is no “adding a network protocol header to the data for sending the data to the storage unit” disclosed in “column 7, lines 35-49.” There is no mention of “sending the data to the storage unit,” and there is no mention of “adding a network protocol header to the data.” For at least these reasons, Elzur does not anticipate claim 33.

III. 35 U.S.C. §103

A. The Rejection over Elzur in View of Day

Claims 2, 5, 22 and 25 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Elzur in view of U.S. Patent No. 6,065,096 to Day et al. (“Day”).

1. Claims 2 and 22

Regarding claims 2 and 22, the latest Office Action states, on pages 6 and 7:

As per claims 2 and 22, Elzur discloses the interface device of claims 1 and 21. Elzur does not explicitly disclose the interface further comprising a SCSI controller connectable to the storage unit.

However, Day discloses SCSI interface channels attached to disk drives (column 2, lines 40-54, column 5, lines 1-25).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate in Day’s interface comprising a SCSI controller in Elzur’s device in order to provide for a simple, lower cost RAID controller architecture to enable lower cost and complexity associated with high performance and high reliability storage subsystems.

Applicants again respectfully disagree with the Office Action statement that “Elzur discloses the interface device of claims 1 and 21.” As discussed above, Elzur does

not anticipate claim 1 or claim 21 for several reasons. Day does not correct those deficiencies of Elzur. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 2 or claim 22.

2. Claims 5 and 25

Regarding claims 5 and 25, the latest Office Action states, on page 7:

As per claims 5 and 25, Elzur discloses the interface device of claims 1 and 21. Elzur does not explicitly disclose the interface further comprising a RAID controller connectable to the storage unit.

However, Day discloses RAID interface channels attached to disk drives (column 2, lines 11-25, 55-67).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate in Day's interface comprising a RAID controller in Elzur's device allowing the disk interface connections and protocols to be more flexibly selected but at the cost of less integration within the circuit.

Applicants again respectfully disagree with the Office Action statement that "Elzur discloses the interface device of claims 1 and 21." As discussed above, Elzur does not anticipate claim 1 or claim 21 for several reasons. Day does not correct those deficiencies of Elzur. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 5 or claim 25.

B. The Rejection over Elzur in View of Muller

Claims 6-7, 24, 26-27 and 32 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Elzur in view of U.S. Patent No. 6,453,360 to Muller et al. ("Muller").

1. Claim 6

Regarding claim 6, the latest Office Action states, on pages 7 and 8:

As per claim 6, Elzur does not explicitly discloses the network interface device of claim 1, further comprising a file cache adapted to store said data.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate

Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants agree with the Office Action statement that "Elzur does not explicitly discloses the network interface device of claim 1, further comprising a file cache adapted to store said data." As discussed above, Elzur does not anticipate claim 1 for several reasons. Muller does not correct those deficiencies of Elzur, and therefore claim 6 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose a file cache adapted to store said data on an interface device. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 6.

2. Claim 7

Regarding claim 7, the latest Office Action states, on page 8:

As per claim 7, Elzur does not explicitly discloses further discloses the network interface device of claim 1, further comprising a file cache adapted to store said data under control of a file system in the host.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants reiterate that Elzur does not anticipate claim 1 for several reasons, as discussed above. Muller does not correct those deficiencies of Elzur, and therefore claim 7 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose an interface device including a file cache adapted to store said data under control of a file system in the host. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 7.

3. Claim 24

Regarding claim 24, the latest Office Action states, on pages 8 and 9:

As per claim 24, Elzur does not explicitly discloses the interface device of claim 21, further comprising a file cache adapted to store said data.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants reiterate that Elzur does not anticipate claim 21 for several reasons, as discussed above. Muller does not correct those deficiencies of Elzur, and therefore claim 24 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose an interface device including a file cache adapted to store said data. Moreover, applicants respectfully assert that claim 24 recites: "The interface device of claim 21, further comprising a Fibre Channel controller connectable to the storage unit." For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 24.

4. Claim 26

Regarding claim 26, the latest Office Action states, on page 9:

As per claim 26, Elzur does not explicitly discloses the interface device of claim 21, further comprising a file cache adapted to store said data.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants reiterate that Elzur does not anticipate claim 21 for several reasons, as discussed above. Muller does not correct those deficiencies of Elzur, and therefore claim 26 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose an

interface device including a file cache adapted to store said data. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 26.

5. Claim 27

Regarding claim 27, the latest Office Action states, on page 9:

As per claim 27, Elzur does not explicitly disclose the interface device of claim 21, further comprising a file cache adapted to store said data under control of a file system in the computer.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants reiterate that Elzur does not anticipate claim 21 for several reasons, as discussed above. Muller does not correct those deficiencies of Elzur, and therefore claim 27 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose an interface device including a file cache adapted to store said data under control of a file system in the host. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 27.

6. Claim 32

Regarding claim 32, the latest Office Action states, on page 10:

As per claim 32, Elzur does not explicitly disclose the method of claim 28, further comprising storing the data on a file cache of the interface device.

However, the use and advantages for using such cache is well-known to one of ordinary skill in the art as evidenced by Muller (column 56, lines 20-30, column 58, lines 26-30).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Muller's file cache in Elzur's device in order to store non-assembled packets.

Applicants reiterate that Elzur does not anticipate claim 28 for several reasons, as discussed above. Muller does not correct those deficiencies of Elzur, and therefore claim 32 is nonobvious over Elzur in view of Muller. In addition, applicants respectfully assert that Muller does not, in column 56, lines 20-30 or column 58, lines 26-30, disclose storing the data on a file cache of the interface device. For at least these reasons, the Examiner has again failed to present a *prima facie* case of obviousness for claim 32.

IV. Conclusion

As detailed above, the latest Office Action yet again fails to state a *prima facie* case of anticipation or obviousness for any of the pending claims. Appellants respectfully assert that all the pending claims are allowable and solicit a Notice of Allowance.

Respectfully submitted,

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